

Reproductive Biology of *Terapon jarbua* from the Estuary of Tamshui River

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Like most of estuarine fishes, occurrence of *Terapon jarbua* reveals a clear seasonal pattern, with a mass invasion of larvae and juveniles to the river mouth during May and November for feeding, and retreats to the farther deeper ground for spawning when fully grown. The prolonged spawning takes place during April and October, or even longer, determined by the monthly observations of gonad conditions and the occurrence of postlarvae and juveniles. The cycle of liver lipid content is more or less in agreement with the reproductive cycle of the fish. *T. jarbua* is a protogynous fish with the sex reversal commenced at the fish of larger than 10.5 cm in fork length (FL). Among the adults, female is outnumbered with the proportion of 1.8:1 to the male. This species seemed to be a fractional spawner. Batch fecundity ranged 37,083-480,400 (mean 145,816) which is equivalent to the relative fecundity of 334-1,258 (520) per gram body weight. Biological minimum size of maturation is 143 mm FL for male and 148 mm FL for female.

Key words: *Terapon jarbua*, Tamshui estuary, Gonad condition, Spawning season, Sex ratio, Fecundity, Larval occurrence.

關鍵詞: 花身鷄魚, 淡水河口, 生殖腺狀況, 產卵季節, 性比, 抱卵數, 仔稚魚出現。

INTRODUCTION

Terapon jarbua (Forsk.) belonging to the family Teraponidae, is a medium-sized food fish that inhabits the inshore and brackish waters of much of the tropical and subtropical Indo-Pacific regions on sandy bottoms. This species is widely distributed from southern Japan to northwestern Australia and extending westwardly to South Africa. In Taiwan, this species occurred around most of the coast of Taiwan except the abruptly deep eastern coast, and is a popular game fish for anglers and caught mainly for food. Larvae and juveniles of the species enter the estuaries with great abundance during May and November for feeding, and retreat to the deeper water of farther away from the mouth of Tamshui river for spawning when fully grown. The adults are commercially caught by longliners and trawlers at the depth of shallower than 50 m. The fish from different habitats of Tamshui estuarine system may have link one another, being probably involved with the annual recruitment of the species. Reproduction is a main cause of the recruitment of the fish stock.

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